

Chapter 5

Upgrading Classroom Environments for Tomorrow's Learners

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ABSTRACT

Educational structure in the P-12 environment has not changed in a century. However, with the onset of the coronavirus pandemic, school districts were forced to become innovative in their lesson delivery models. That necessary shift has provided innovative thinking for administrators and teacher leaders about what classrooms of tomorrow might look like, supported by a hybrid model or completely online courses. This chapter will outline how to design and implement courses for a potential hybrid or online class from a teacher perspective. Further, suggestions for administrators to support the ever-evolving role of the teacher will be shared.

INTRODUCTION

The structure of schools has remained stagnant for some time. Schools in the 19th century were not designed for children to learn creatively; “they reflected the factory model of organization resulting from the ascension of industry and economic expansion” (Hayes-Jacobs, 2010, p. 9). While there has been an abundance of innovation, invention, and information advancement in the world since the 19th century, the structure of a classroom environment and the schooling system has not changed as drastically. However, over the last decade, with cost-effective, easier access to information through technology-enhanced learning tools joined with innovative educators, some schools have begun to transform P-12 classrooms for tomorrow (Battelle for Kids, 2020). Current kindergarten students will graduate from high school in 2034; attend college or enter the workforce and likely work until age 70, bringing them to the year 2087. It is difficult to determine what life will look like in 2087, but our students need to be prepared by becoming creative, collaborative, critical thinkers.

DOI: 10.4018/978-1-7998-6829-3.ch005

The year 2020 brought a pandemic that impacted U.S. school structure in a way that has not happened since the 1918 flu. In the 2020-2021 academic year, teachers were required to think outside of the box, be more flexible, and more intentional with the curriculum that was covered. There were many positives for education during the pandemic that allowed educators and administrators to think differently about curriculum delivery and what it means for the future. To continue this flexibility and innovative thinking in school systems, leaders need to allow more educators to prepare students for the future, by supporting and encouraging them to be instilling an innovative, growth mindset through an infusion of the 21st century learning framework into the curriculum (The Partnership for 21st Century Learning, 2015). This chapter will provide administrators and teacher leaders with implementation strategies, based on research and best practices, for supporting the design and delivery of online and blended learning in a P-12 school system.

BACKGROUND

Traditional Classrooms

In a traditional, physical classroom setting, most teachers are confident in their ability to engage their students with the content and with one another in a meaningful way. Teachers have been taught engagement strategies, collaboration techniques, and learning theories in their teacher preparation programs to support their in-classroom lesson plans. In the United States, teachers are often assessed on their effectiveness to teach based on two main factors: teaching quality and teacher quality (Darling-Hammond, 2013). Teaching quality refers to the quality of instructional implementation and content-knowledge; while teacher quality entails relationships built with students, personality, and dispositions. As important as these two factors are for in-person teaching to be effective, they are also necessary qualities for teachers who lead technology enhanced courses, such as hybrid or online.

Over the decades, more research has been done on how the brain responds to information, specifically how brain-based learning occurs. This information is slowly entering the P-12 system for teachers to receive brain-based learning professional development training alongside student and teacher Social Emotional Learning implementation. According to Tokuhama-Espinosa (2021), Mind, Brain, and Education Science tenets such as social interactions, feedback, and relevant and meaningful contexts are especially helpful in engaging students within the classroom. Tenets vary based on students' differences, meaning that one student may need more constructive feedback or increased social interaction to learn more deeply than another student. Using this knowledge of tenets, teachers who build strong connections amongst their community of learners are able to better reach the needs of students and deepen their learning.

Through the use of class communities and hands-on learning, teachers feel empowered in their classrooms to make strong learning impressions on their students. As technologies in the classroom have increased, many teachers have opted to include those technologies in their tool kit of learning impressions. For example, teachers may utilize Google Slides or PowerPoint to create a visual slideshow for their class lecture. The use of the technology allows for a visual to enhance what is being spoken by the teacher. Other examples of technology integration would include allowing students to utilize devices to connect and create content knowledge simultaneously. These experiences help students to foster generative cognitive processing, thus creating deeper learning which moves the knowledge into the long-term memory of their brains. Pre-pandemic there was a mixture of teachers who were connected to their

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